

TOBACCO INDUSTRY RESEARCH COMMITTEE
350 FIFTH AVENUE NEW YORK 1, N. Y.

6 Budget Plan

Salaries (10 months)
Expendable Sample
Application For Research Grant

Overhead
Other

Date:

August 6, 1954

1. Name of Investigator: Philip O'Bryan Montgomery

2. Title: Associate Professor of Pathology, Southwestern Medical School of The University of Texas
3. Institution: Southwestern Medical School of The University of Texas
4. Address: 2211 Oak Lawn Avenue, Dallas 19, Texas

4. Project or Subject: The investigation of the possible role of chronic inflammation in chemical carcinogenesis.

5. Additional Information: This for first year. The direction of the project will be determined by the results of the experiments. It is anticipated that the total cost of the project will be between \$2,000.00 and \$10,000.00 for the first five years.

5. Detailed Plan of Procedure (Use reverse side if additional space is needed):

The purpose of this investigation is to learn whether or not a carcinogenic substance - in this case Benzpyrene - can alter a sterile, chronic inflammatory exudate in such a way that the cell-free exudate becomes carcinogenic even though the carcinogen is not detectable in its original form by light absorption technics, and to learn more about the role of chronic inflammation in carcinogenesis.

The investigation will be conducted by the following procedure: Young adult rabbits will be injected intra-pleurally with small amounts of turpentine to produce a sterile chronic inflammatory exudate. A cell-free extract of this material will be prepared by centrifugation, and daily injections and topical applications of it will be made on the ears of other rabbits. A similar material will be prepared with the addition of a small amount of Benzpyrene added to the turpentine. This amount will be accurately measured and then recalculated on a per unit volume basis by its spectral absorption at 365 mμ. The inflammatory exudate will not be utilized for injection or painting until the Benzpyrene no longer gives its characteristic absorption peak. The experiment will then be repeated as outlined above.

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Signature: P. O. B. Montgomery
Director of Project

/s/ E. A. Gell
Business Officer of the Institution

1003541508

6. Budget Plan:

Salaries (1 technician)	\$3,000.00
Expendable Supplies	2,000.00
Permanent Equipment	.00
Overhead	400.00
Other	.00
Total	\$5,400.00

7. Anticipated Duration of Work: 1 Year

8. Facilities and Staff Available: General laboratory space, animal cages, routine tissue preparation laboratory, histochemistry laboratory, two full-time technicians (not to be paid from grant), Spince Model L ultra-centrifuge, Ultra-violet microscope with television camera and screen, RCA electron microscope. Student fellows during summer months. U. Texas

9. Additional Requirements: The investigation of the possible role of chronic inflammation in chemical carcinogenesis.

None for first year. The direction of the project will depend upon the results of the experiments. It is anticipated that the following year's requirements will be between \$5,000.00 and \$10,000.00 per year for three to five years.

10. Additional Information (Including relation of work to other projects and other sources of supply):

The equipment for this laboratory, as outlined above, has been donated by private subscription. The two full-time technicians now at work and are supported by The University of Texas. The histochemical work now in progress is supported by U.S.P.H.S. Grant A-643 from the Committee on the National Advisory Arthritis and Metabolic Diseases Council. No other aid is available. The current work in the laboratory is outlined as follows: 1) A study of dermal collagen in relation to skin cancer in man and experimental animals. In this study dermal collagen is being studied by a battery of histochemical tests and by microspectroscopy. Preliminary results indicate that the collagen adjacent to human skin cancer is histochemically very different than normal and that it shows a very different absorption pattern from 250 to 320 millimicrons. This work is now being extended to methylcholanthrene carcinogenesis of the skin of mice. 2) The investigation of cortisone inhibition of normal and neoplastic growth. Preliminary studies indicate that cortisone inhibition of wound healing in rats may be completely reversed by the local application of beef amniotic fluid. Similarly, cortisone inhibition of growth in chicks may be overcome by subcutaneous injections of beef amniotic fluid. These studies are now being extended to the attempt to reverse cortisone inhibition of methylcholanthrene-induced skin tumors in mice, with beef amniotic fluid. Cell-free extracts become carcinogenic when injected into mice, and it is hoped that the role of skin chronic inflammation in carcinogenesis.

Signature 2s /s/ p o'b Montgomery
Director of Project

/s/ E. A. Gell
Business Officer of the Institution

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